WHAT IS CLAIMED IS:

1. An implantable graft comprising:

a flat-woven tubular portion having opposed first and second tubular ends with a contiguous bulbous woven section therebetween, said bulbous woven section having opposed first and second open ends, the first bulbous end being contiguous with said first tubular end, said second bulbous end being contiguous with said second tubular end, the first tubular end having a first number of warp yarns interlaced with a plurality of fill yarns in a woven pattern to define a first flat-woven tubular diameter, the second end having a second number of warp yarns interlaced with said plurality of fill yarns in a woven pattern to define a second flat-woven tubular diameter, and said bulbous section having a third number of warp yarns interlaced with said plurality of fill yarns in a woven pattern to define a third flat-woven tubular diameter;

wherein said third number of warp yarns is greater than either of said first or said second number of warp yarns; and further wherein said third number of warps yarns are engagingly interlaced at said first bulbous end and disengagingly interlaced at second bulbous end to provide a seamless implantable graft having a third diameter being greater than either of said first or said second diameters.

2. The implantable graft of claim 1, wherein said second number of warp yarns is equal to said first number of warp yarns.

3. The implantable graft of claim 1, wherein said second diameter is equal to said first diameter.

4. The implantable graft of claim 1, wherein said third diameter is from about 2 mm to about 20 mm greater that said first or said second diameter.

5. The implantable graft of claim 4, wherein said first diameter or said second diameter is from about 10 mm to about 50 mm.

6. The implantable graft of claim 1, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are selected from the group consisting a plain weave, a basket weave, a twill weave, a velour weave, a double velour weave, satin weave, terry weave and combinations thereof.

7. The implantable graft of claim 6, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are the same.

8. The implantable graft of claim 6, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are different.

9. The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a different yarn density.

10. The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a same yarn density.

11. The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a different yarn denier.

12. The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a same yarn denier.

13. The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a different yarn type wherein the different yarn type is selected from the group consisting of multifilament, monofilament, and staple.

14. The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a same yarn type wherein the different yarn type is selected from the group consisting of multifilament, monofilament, and staple.

15. The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section has a different yarn material wherein the different yarn material is selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

16. The implantable graft of claim 1, wherein at least one of said woven portions of said first tubular end, said second tubular end and said bulbous section have a same yarn material wherein the different yarn material is selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

17. The implantable graft of claim 1, said woven portions of said first tubular end, said second tubular end and said bulbous section are seamlessly transitioned.

18. The implantable graft of claim 1, wherein said warp yarns and said fill yarns are polymeric yarns.

19. The implantable graft of claim 1, wherein said warp yarns and said fill yarns include materials selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

20. The implantable graft of claim 1, wherein said warp yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

21. The implantable graft of claim 1, wherein said fill yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

22. The implantable graft of claim 1, wherein said first bulbous end includes a textile portion having an increasing number of warp yarns at the rate of at least three or more warp yarns for every two of said fill yarns.

23. The implantable graft of claim 1, wherein said second bulbous end includes a textile portion having an decreasing number of warp yarns at the rate of at least three warp yarns or greater for every two of said fill yarns.

24. The implantable graft of claim 1, wherein said bulbous section has opposed edges and the additional warp yarns are threadingly engaged and disengaged at said edges.

25. The implantable graft of claim 1, wherein the additional warp yarns are threadingly engaged at different longitudinal locations along a length of said first bulbous end and further wherein the additional warp yarns are threadingly disengaged at different longitudinal locations along a length of said second bulbous end.

26. The implantable graft of claim 1, wherein the additional warp yarns are threadingly engaged at different radial locations along a width of said first bulbous end and further wherein the additional warp yarns are threadingly disengaged at different radial locations along a width of said second bulbous end.

27. The implantable graft of claim 1, wherein said tubular woven portion is radially crimped.

28. The implantable graft of claim 1, wherein said bulbous woven portion is radially crimped.

29. The implantable graft of claim 1, wherein said tubular and said bulbous woven portions are radially crimped.

30. The implantable graft of claim 1, further comprising a mechanical or tissue heart valve securable attached to said second tubular end.

31. The implantable graft of claim 1, wherein said tubular end or said second tubular end is a multi-lumen tubular structure.

32. An implantable, flat-woven graft comprising:

a hollow tubular woven portion having opposed tubular ends and opposed flat-woven edges, said woven portion having a number of warp yarns interlaced with a number of fill yarns in a flat-woven tubular woven pattern to define a flat-woven tubular diameter; and

a bulbous woven portion having a greater number of warp yarns interlaced with said fill yarns in a flat-woven tubular bulbous pattern contiguously woven between said opposed ends, wherein the greater number of warp yarns are threading engaged and disengaged with said fill yarns at different spaced-apart locations from the edges along the width of said graft at said bulbous woven portion to define a flat-woven bulbous diameter.

33. The implantable graft of claim 32, wherein said bulbous diameter is from about 2 mm to about 20 mm greater that said tubular diameter.

34. The implantable graft of claim 33, wherein said tubular diameter is from about 10 mm to about 50 mm.

35. The implantable graft of claim 32, wherein said tubular woven pattern and said bulbous woven pattern are selected from the group consisting a plain weave, a basket weave, a twill weave, a velour weave, a double velour weave, satin weave, terry weave, and combinations thereof.

36. The implantable graft of claim 35, wherein said tubular woven pattern and said bulbous woven pattern are the same.

37. The implantable graft of claim 35, wherein said tubular woven pattern and said bulbous woven pattern are different.

38. The implantable graft of claim 32, wherein said warp yarns and said fill yarns are polymeric yarns.

39. The implantable graft of claim 32, wherein said warp yarns and said fill yarns include materials selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

40. The implantable graft of claim 32, wherein said warp yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

41. The implantable graft of claim 32, wherein said fill yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

42. The implantable graft of claim 32, wherein said bulbous woven portion includes a woven portion having an increasing number of warp yarns at the rate of greater than three warp yarns for every two of said fill yarns.

43. The implantable graft of claim 32, wherein said bulbous woven portion includes a woven portion having an decreasing number of warp yarns at the rate of greater than three warp yarns for every two of said fill yarns.

44. The implantable graft of claim 32, wherein said tubular woven portion is radially crimped.

45. The implantable graft of claim 32, wherein said bulbous woven portion is radially crimped.

46. The implantable graft of claim 32, wherein said tubular and said bulbous woven portions are radially crimped.

47. The implantable graft of claim 42, wherein said increasing number of warp yarns are introduced at different longitudinal locations along said woven portion.

48. The implantable graft of claim 43, wherein said decreasing number of warp yarns are removed at different longitudinal locations along said woven portion.

49. An implantable graft comprising:

a flat-woven tubular portion having opposed first and second tubular ends with a contiguous bulbous woven section therebetween, said bulbous woven section having opposed first and second open ends, the first bulbous end being contiguous with said first tubular end, said second bulbous end being contiguous with said second tubular end, the first tubular end having a first number of polymeric warp yarns interlaced with a plurality of polymeric fill yarns in a woven pattern to define a first flat-woven tubular diameter and a first woven length, the second end having a second number of polymeric warp yarns interlaced with said plurality of polymeric fill yarns in a woven pattern to define a second flat-woven tubular diameter and a second woven length, and said bulbous section having a third number of warp yarns interlaced with said plurality of fill yarns in a woven pattern to define a third flat-woven tubular diameter and a third woven length;

wherein said third number of warp yarns is greater than either of said first or said second number of warp yarns to define an additional number of warp yarns; and further wherein said third number of warps yarns are engagingly interlaced at the rate of at least three or more warp

yarns for every two of said fill yarns at said first bulbous end and disengagingly interlaced at the rate of greater than three warp yarns for every two of said fill yarns at second bulbous to provide a seamless implantable graft having a third diameter being greater than either of said first or said second diameters.

50. The implantable graft of claim 49, wherein said second number of warp yarns is equal to said first number of warp yarns.

51. The implantable graft of claim 49, wherein said second diameter is equal to said first diameter.

52. The implantable graft of claim 49, wherein said third diameter is from about 2 mm to about 20 mm greater that said first or said second diameter.

53. The implantable graft of claim 51, wherein said first diameter or said second diameter is from about 10 mm to about 50 mm.

54. The implantable graft of claim 49, wherein said third length is greater or equal to the length represented by said first diameter.

55. The implantable graft of claim 49, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are selected from the group consisting a plain weave, a basket weave, a twill weave, a velour weave, a double velour weave, satin weave, terry weave, and combinations thereof.

56. The implantable graft of claim 55, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are the same.

57. The implantable graft of claim 55, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are different.

58. The implantable graft of claim 49, wherein said warp yarns and said fill yarns are polymeric yarns.

59. The implantable graft of claim 49, wherein said warp yarns and said fill yarns include materials selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

60. The implantable graft of claim 49, wherein said warp yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

61. The implantable graft of claim 49, wherein said fill yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

62. The implantable graft of claim 49, wherein said additional third number of warp and threadingly engaged at edges of said first bulbous end and threadingly disengaged at edges of said second bulbous end.

63. The implantable graft of claim 49, wherein said additional third number of warp and threadingly engaged at spaced apart locations across a width of said first bulbous end and threadingly disengaged at spaced apart locations across a width of said second bulbous end.

64. The implantable graft of claim 49, wherein said additional third number of warp and threadingly engaged at spaced apart locations along a longitudinal length of said first bulbous end and threadingly disengaged at spaced apart locations along a longitudinal length of said second bulbous end.

65. A method for weaving a graft comprising:

weaving a first flat-woven tubular section having opposed open ends and having a number of warp yarns and a number of fill yarns interlaced in a woven pattern to define a first flat-woven diameter;

providing additional warp yarns;

weaving said additional warp yarns into the woven pattern with said number of fill yarns at one of said open ends of said first tubular section to define a segment having a second flat-woven diameter, the second diameter being greater than the first diameter; and

removing said additional warp yarns from said weaving pattern to provide a third woven section having a third diameter, where the third diameter is less than said second diameter.

66. The method of claim 65, wherein said third number of warp yarns is equal to said first number of warp yarns.

67. The method of claim 65, wherein said third diameter is equal to said first diameter.

68. The method of claim 65, wherein said second diameter is from about 2 mm to about 20 mm greater that said first or said third diameter.

69. The method of claim 68, wherein said first diameter or said third diameter is from about 10 mm to about 50 mm.

70. The method of claim 65, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are selected from the group consisting of a plain weave, a basket weave, a twill weave, a velour weave, a double velour weave, satin weave, terry weave, and combinations thereof.

71. The method of claim 70, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are the same.

72. The method of claim 70, wherein said woven patterns of said first tubular end, said second tubular end and said bulbous section are different.

73. The method of claim 65, wherein said warp yarns and said fill yarns are polymeric yarns.

74. The method of claim 65, wherein said warp yarns and said fill yarns include materials selected from the group consisting of polyester, polypropylene, polyethylene, polyurethane, polytetrafluoroethylene and combinations thereof.

75. The method of claim 65, wherein said warp yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

76. The method of claim 65, wherein said fill yarns are single ply, 70 denier, 54 filament, twisted flat polyester; double ply, 40 denier, 27 filament, twisted set polyester; or combinations thereof.

77. The method of claim 65, wherein the step of weaving said additional warp yarns comprises increasing the number of warp yarns at a rate of greater than three warp yarns for every two of said fill yarns.

78. The method of claim 65, wherein the step of removing said additional warp yarns comprises decreasing the number of warp yarns at a rate of greater than three warp yarns for every two of said fill yarns.

79. An implantable prosthesis comprising:

a first hollow tubular woven portion having a number of warp yarns interlaced with a first number of fill yarns in a flat-woven tubular woven pattern to define a flat-woven tubular diameter;

a bulbous woven portion seamlessly transitioned from said first woven section, said bulbous woven section having a greater number of warp yarns interlaced with said fill yarns in a flat-woven tubular bulbous pattern; and

a third hollow tubular woven portion seamlessly transitioned from said bulbous portion, said third woven portion having a third number of warp yarns interlaced with said number of fill yarns in a flat-woven tubular woven pattern to define a third flat-woven tubular diameter, wherein said greater number of warp yarns of said bulbous portion is greater than said first or said third number of warp yarns.